South Carolina Infant Mortality Statistics
From Live Birth/Infant Death Cohort 2002 Data

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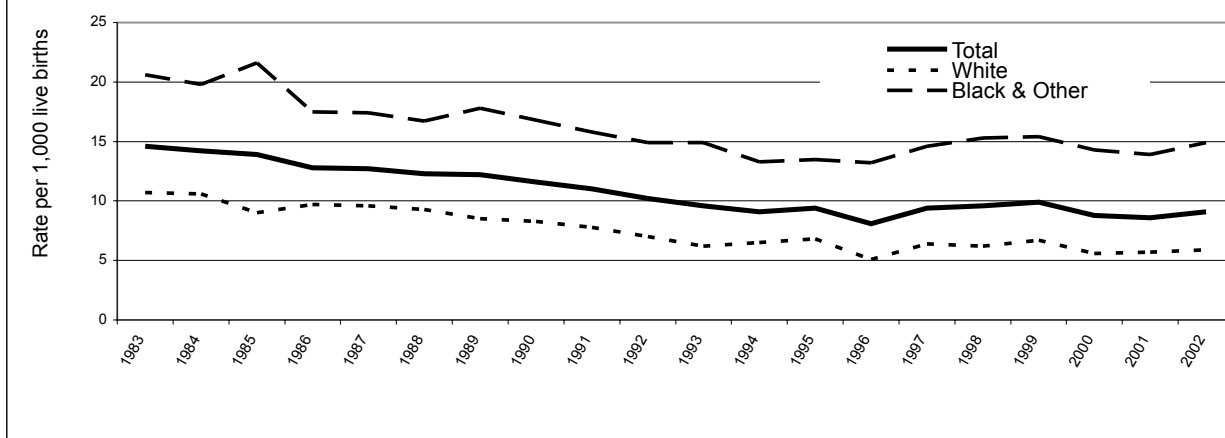
Introduction

High infant mortality rates continue to be an important public health concern in South Carolina. A linked data set of South Carolina birth and death certificate information was used to calculate the infant mortality rate. This information was presented by race of mother (total, white, and black and other).

From 1983-1996, the infant mortality rate followed a decreasing trend (Figure 1). During this time, the infant mortality rate decreased almost by half (45 percent) from 14.6 in 1983 to 8.1 in 1996, the lowest infant mortality rate to date. More recently, the infant mortality rate seems to have leveled around 9.4 for the two years before and after 1996. After 1996, the infant mortality rate fluctuated, rising to 9.9 in 1999 and then dropping to 8.6 infant deaths per 1000 live births in 2001. The rate then increased by 5.8 percent to 9.1 in 2002 (495 infant deaths, 54,453 live births).

Figure 1. South Carolina Infant Mortality Rates by Race, 1989-2002 Residence Data

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
TOTAL	14.6	14.2	13.9	12.8	12.7	12.3	12.2	11.6	11.0	10.2	9.6	9.1	9.4	8.1	9.4	9.6	9.9	8.8	8.6	9.1
White	10.7	10.6	9.0	9.7	9.6	9.3	8.5	8.3	7.8	7.0	6.2	6.5	6.8	5.1	6.4	6.2	6.7	5.6	5.7	5.9
Black & Other	20.6	19.8	21.6	17.5	17.4	16.7	17.8	16.8	15.8	14.9	14.9	13.3	13.5	13.2	14.6	15.3	15.4	14.3	13.9	14.9

NOTE:Race of infant (1983-1989); Race of mother (1990-2002)   **Source:** SC DHEC: PHSIS-Division of Biostatistics and Health GIS

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From 2001 to 2002, South Carolina's infant mortality rate increased by 3.5 percent among whites (from 5.7 to 5.9). There were 206 infant deaths and 35,152 live births to white mothers during 2002. Among black and other mothers, the rate increased from 13.9 in 2001 to 14.9 in 2002, an increase of 7.2 percent. There were 288 infant deaths and 19,294 live births to black and other mothers during 2002. The neonatal (<28 days) mortality rate for infants of white mothers and black and other mothers increased by 5.3 percent and 10.1 percent respectively in 2002 compared to 2001 (data not shown). The postneonatal (28+ days) mortality rate for infants of black and other mothers increased by 2.6 percent respectively in 2002 compared to 2001 (data not shown). Five-year infant mortality rates and 95 percent confidence intervals are shown in Table 1.

Infant mortality rates were exponentially higher among the lowest birth weights.

Table 1. Five-year Infant Mortality Rates[1] with 95 percent Confidence Intervals[2] SC Residence Data				
Years	Number of Infant Deaths	Number of Live Births	Infant Mort. Rate	95% Confidence Interval
1983-1987	3,514	257,638	13.6	(13.1,14.1)
1988-1992	3,248	284,037	11.4	(11.0,11.8)
1993-1997	2,373	259,845	9.1	(8.7,9.5)
1998-2002	2,528	274,704	9.2	(8.8,9.6)

[1] Rates per 1,000 live births

[2] $R = 61.981(r/n)^{1/2}$, where r=infant mortality rate and n=number of live births

Analyses were conducted to examine characteristics of infant mortality to South Carolina resident mothers in 2002 and in previous years. Highlights of these analyses are described here and include: birthweight-specific mortality rates, trends, leading causes of infant death, multivariate logistic analysis, and GIS analysis.

Birthweight-Specific Infant Mortality Rates

Over the past three years (2000-2002), mortality rates for very low birthweight infants (VLBW:<1500 g) increased from 271.9 in 2000 to 277.7 per 1,000 live births in 2002; for moderately low birthweight infants (MLBW:1500-2499 g), from 14.6 to 15.0; and for normal birthweight infants (NBW:2500+ g), from 2.6 to 2.7 (data not shown). Across all three birthweight groups, these rates were higher among the black and other race group during this three-year period.

A line graph depicting the relationship of infant mortality rates with 11 consecutive birthweight groups is shown in Figure 2. The mortality rate is based on a logarithmic scale. The graphing of birthweight-specific mortality rates revealed that infant mortality rates were exponentially higher among the lowest birthweights. Almost all infants weighing <500 grams experienced an infant death, while the mortality rate for normal birthweight infants was extremely low. Mortality rates decreased as birthweight increased, up to about 3500-3999 grams. This trend has remained constant over the past decade.

Figure 2. Birthweight-Specific Infant Mortality Rates[1] by Maternal Race[2], 1998-2002 Residence Data
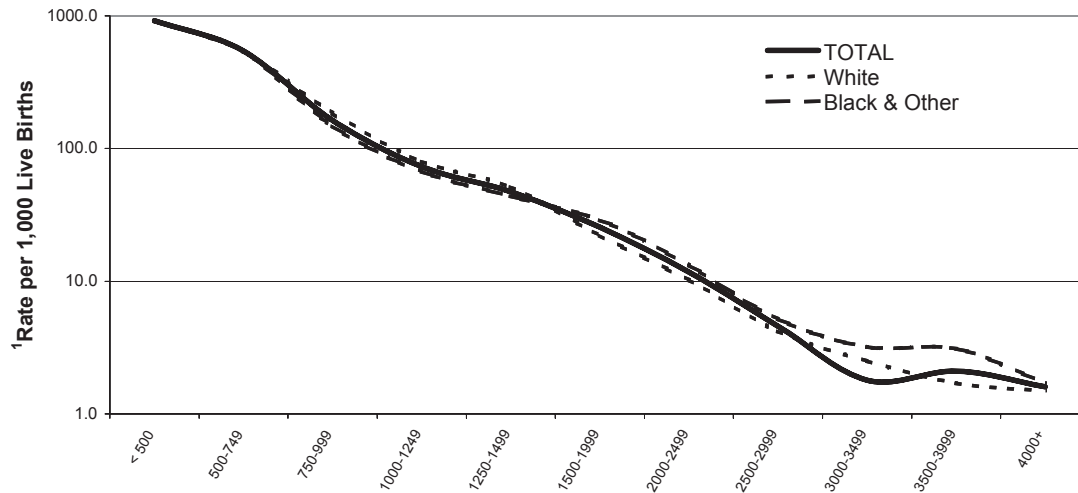
	< 500	500-749	750-999	1000-1249	1250-1499	1500-1999	2000-2499	2500-2999	3000-3499	3500-3999	4000+
TOTAL	923.2	545.1	163.1	73.1	47.3	25.6	11.7	4.6	1.8	2.1	1.6
White	913.3	541.5	185.8	79.9	51.5	22.2	10.2	4.2	2.5	1.7	1.5
Black & Other	927.2	546.9	147.9	66.8	43.8	28.8	13.2	5.2	3.2	3.1	1.7

[1] Rate per 1,000 live births
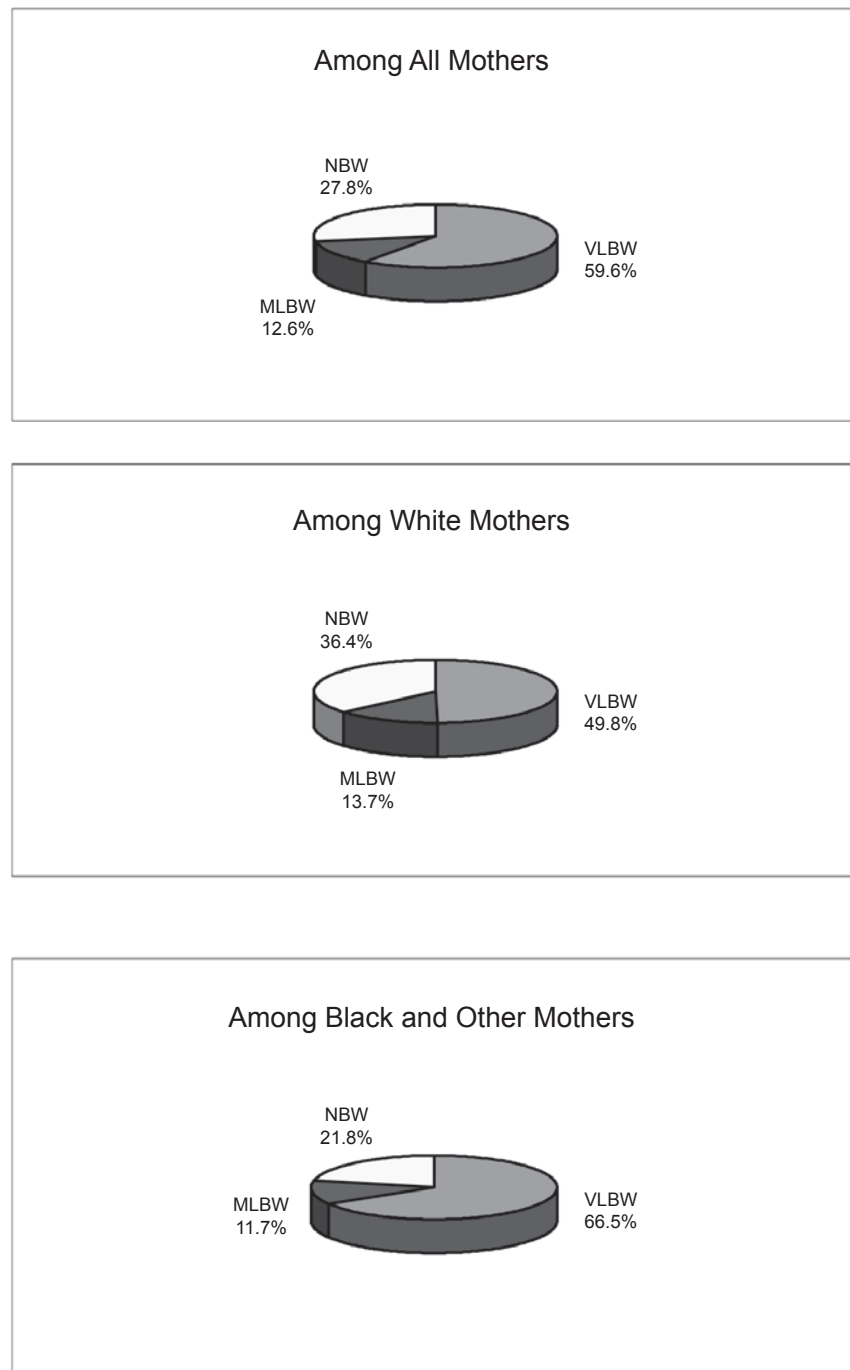[2] Race breakdown for all years is mother's race.
Note: Rate scale is logarithmic.

The percentage of infant deaths by birthweight group for white mothers and for black and other mothers is shown in Figure 3. Overall, 59.6 percent of infant deaths involved VLBW infants. Just under half of the infants who were born to white mothers and who died under one year of age were VLBW. By comparison, almost two-thirds of the infants who were born to black and other mothers and who died before their first birthday were VLBW. Nearly 36.4 percent of infant deaths involved NBW infants among white mothers, however, 21.8 percent of infant deaths involved NBW infants among black and other mothers.

Figure 3. Percentage of Infant Deaths by Birthweight Group, 2000-2002 Residence Data

Among All Mothers

NBW
27.8%

VLBW
59.6%

MLBW
12.6%

Among White Mothers

NBW
36.4%

VLBW
49.8%

MLBW
13.7%

Among Black and Other Mothers

NBW
21.8%

MLBW
11.7%

VLBW
66.5%

[1] Does not include missing birthweights

Demographic Characteristics Across Three-Year Periods

Trend tables were developed to assess possible demographic shifts in South Carolina's population that may affect infant mortality. For comparison purposes, two three-year time periods (1997-1999 and 2000-2002) were used.

Demographic, perinatal, and pregnancy outcome characteristics were examined for the defined three race groups (total, white, and black and other). Table 2 shows percentages of selected characteristics for all live births for six years. For all race groups, the percentage of mothers with a higher education (more than high school) had increased. The percentage of Hispanic mothers was on the rise across the races. Mothers in all race groups experienced an increasing number of multiple births. The percentage of mothers who are 35 or older had increased regardless of race of mother. Total and white mothers who received adequate prenatal care (Kessner Index) had decreased. The percentage of intermediate prenatal care (Kessner Index) had increased regardless of race of mother. The percentage of mothers who smoke during pregnancy had decreased among total and white mothers. However, the percentage of mothers who drink during pregnancy had increased among total and white mothers. The percentage of VLBW infants born to black and other mothers was at least twice as high as the percentage of VLBW infants born to white mothers. The percentage of MLBW infants born to black and other mothers was approximately 79 percent higher than the percentage of MLBW infants born to white mothers.

An additional characteristic examined among the infant death population was age at death. These results are shown in Table 3. Among total mothers and black and other mothers, the percentages of infant deaths among mothers who received adequate prenatal care had increased, however, those for inadequate prenatal care had decreased. Among the infant deaths, the percentage of Hispanic mothers had increased, however, the increase was not statistically significant. The percentage of infant deaths had decreased for total mothers who were less than 18 years old. The percentage of infant deaths in multiple birth deliveries had decreased, however, it was not statistically significant.

The percentage of intermediate prenatal care (Kessner Index) had increased regardless of race of mother.

Table 2. Selected Maternal Characteristics[1] for all Live Births across Three-Year Periods, SC Residence Data

Characteristics	1997-1999		2000-2002		Z-test	P-value
	Number	Percent	Number	Percent		
Total						
Maternal Age						
Less than 18 years	10150	6.3	8455	5.1	-15.1273	<0.0001
18-34 years	134786	83.9	140696	84.7	6.4464	<0.0001
35 or more years	15745	9.8	16968	10.2	3.9668	0.0001
Maternal Education						
High School or less	90833	56.5	92172	55.5	-5.9752	<0.0001
More than High School	68632	42.7	73239	44.1	7.9566	<0.0001
Unmarried Mother	43884	27.3	44221	26.6	-4.4312	<0.0001
Hispanic Mother	4219	2.6	8454	5.1	36.4716	<0.0001
Kessner Index of PNC						
Adequate	114052	71.0	116583	70.2	-4.9640	<0.0001
Intermediate	30401	18.9	33303	20.0	8.1505	<0.0001
Inadequate	11903	7.4	11426	6.9	-5.8699	<0.0001
Smoked during pregnancy	21574	13.4	20782	12.5	-7.7838	<0.0001
Drank during pregnancy	1551	1.0	1729	1.0	2.1695	0.0300
Number at Birth						
One	155977	97.0	160970	96.9	-2.6745	0.0075
Two or more	4751	3.0	5177	3.1	2.6643	0.0077
Birthweight Group						
VLBW	3197	2.0	3218	1.9	-1.0767	0.2816
MLBW	12141	7.6	12996	7.8	2.8768	0.0040
NBW	145379	90.4	149934	90.2	-2.0249	0.0429
White						
Maternal Age						
Less than 18 years	4351	4.3	3712	3.5	-9.1426	<0.0001
18-34 years	86094	84.6	90100	85.0	2.3542	0.0186
35 or more years	11272	11.1	12185	11.5	2.9882	0.0028
Maternal Education						
High School or less	50913	50.0	52350	49.4	-3.0063	0.0026
More than High School	50202	49.3	53272	50.2	4.1411	<0.0001
Unmarried Mother	12795	12.6	13380	12.6	0.3115	0.7554
Hispanic Mother	3786	3.7	7824	7.4	36.2976	<0.0001
Kessner Index of PNC						
Adequate	78669	77.3	80186	75.6	-9.0365	<0.0001
Intermediate	15702	15.4	17543	16.6	6.9299	<0.0001
Inadequate	4715	4.6	5449	5.1	5.3422	<0.0001
Smoked during pregnancy	17714	17.4	16675	15.7	-10.3071	<0.0001
Drank during pregnancy	1036	1.0	1228	1.2	3.0748	0.0021
Number at Birth						
One	98754	97.0	102712	96.9	-2.3262	0.0200
Two or more	3002	3.0	3309	3.1	2.2671	0.0234
Birthweight Group						
VLBW	1275	1.2	1327	1.3	-0.0290	0.9769
MLBW	5883	5.8	6469	6.1	3.0824	0.0021
NBW	94593	93.0	98227	92.6	-2.7872	0.0053
Black & Other						
Maternal Age						
Less than 18 years	5797	9.8	4740	7.9	-11.8264	<0.0001
18-34 years	48668	82.6	50569	84.1	7.3197	<0.0001
35 or more years	4469	7.6	4782	8.0	2.4196	0.0155
Maternal Education						
High School or less	39916	67.7	39811	66.2	-5.4007	<0.0001
More than High School	18422	31.3	19960	33.2	7.2342	<0.0001
Unmarried Mother	31087	52.7	30835	51.3	-4.9378	<0.0001
Hispanic Mother	432	0.7	630	1.1	5.7866	<0.0001
Kessner Index of PNC						
Adequate	35374	60.0	36385	60.5	1.8756	0.0607
Intermediate	14695	24.9	15754	26.2	5.0779	<0.0001
Inadequate	7186	12.2	5974	10.0	-12.3799	<0.0001
Smoked during pregnancy	3859	6.6	4105	6.8	1.9599	0.0500
Drank during pregnancy	515	0.9	500	0.8	-0.7825	0.4339
Number at Birth						
One	57203	97.0	58233	96.9	-1.4674	0.1423
Two or more	1749	3.0	1868	3.1	1.4185	0.1560
Birthweight Group						
VLBW	1922	3.3	1891	3.2	-1.1176	0.2637
MLBW	6258	10.6	6526	10.9	1.3509	0.1767
NBW	50771	86.1	51686	86.0	-0.6390	0.5228

[1] Data is stratified by race of mother.

"Unknown" levels of each variable are not listed, but percentages are based on their inclusion.

Table 3. Selected Maternal Characteristics[1] for all Live Births across Three-Year Periods, SC Residence Data

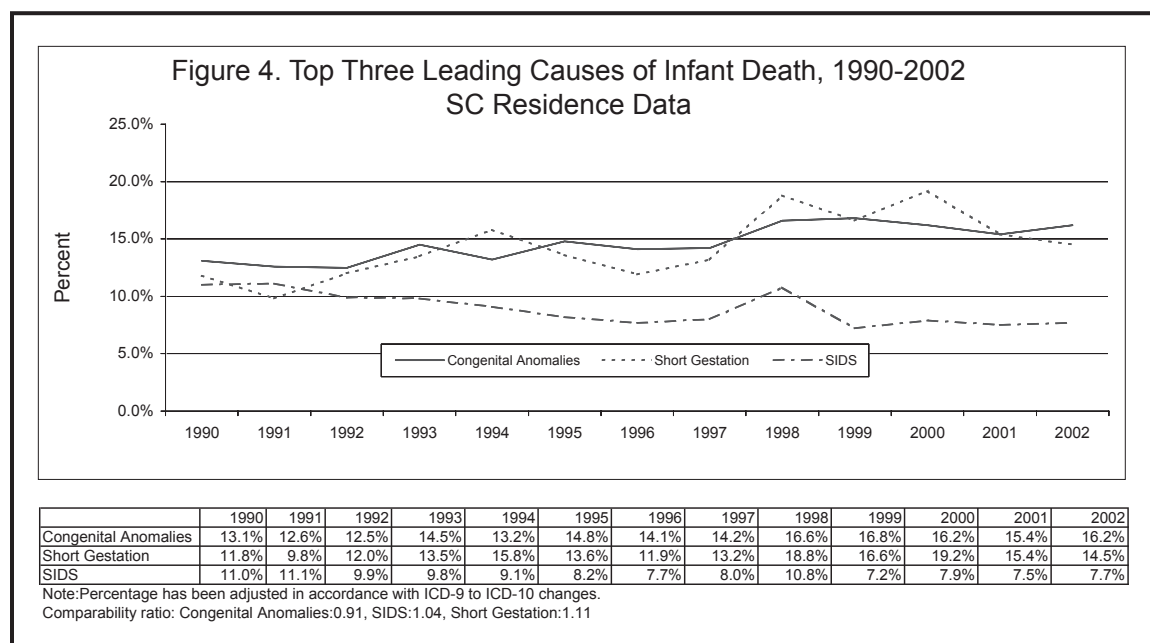| Characteristics	1997-1999		2000-2002		Z-test	P-value
	Number	Percent	Number	Percent		
Total						
Maternal Age						
Less than 18 years	141	9.1	104	7.1	-2.0341	0.0419
18-34 years	1260	81.3	1222	83.1	1.3201	0.1868
35 or more years	147	9.5	142	9.7	0.1643	0.8695
Maternal Education						
High School or less	996	64.3	969	65.9	0.9566	0.3388
More than High School	489	31.6	454	30.9	-0.3936	0.6939
Unmarried Mother	697	45.0	701	47.7	1.4980	0.1341
Hispanic Mother	29	1.9	41	2.8	1.6760	0.0937
Kessner Index of PNC						
Adequate	816	52.7	839	57.1	2.4447	0.0145
Intermediate	315	20.3	333	22.7	1.5593	0.1189
Inadequate	296	19.1	211	14.4	-3.4857	0.0005
Smoked during pregnancy	251	16.2	225	15.4	-0.6690	0.5035
Drank during pregnancy	23	1.5	23	1.6	0.1811	0.8563
Number at Birth						
One	1336	86.2	1286	87.5	1.0471	0.2951
Two or more	214	13.8	183	12.5	-1.1035	0.2698
Birthweight Group						
VLBW	906	58.5	874	59.5	0.5607	0.5750
MLBW	199	12.8	184	12.5	-0.2655	0.7906
NBW	445	28.7	408	27.8	-0.5824	0.5603
Age at Death						
Early neonatal (<7 days)	902	58.2	827	56.3	-1.0744	0.2827
Late neonatal (7-27 days)	197	12.7	195	13.3	0.4541	0.6498
Postneonatal (>27 days)	451	29.1	448	30.5	0.8287	0.4073
White						
Maternal Age						
Less than 18 years	50	7.6	37	6.1	-1.0470	0.2951
18-34 years	537	81.7	504	83.3	0.7334	0.4633
35 or more years	69	10.5	62	10.3	-0.1480	0.8823
Maternal Education						
High School or less	383	58.3	364	60.2	0.6753	0.4995
More than High School	253	38.5	229	37.9	-0.2400	0.8103
Unmarried Mother	143	21.8	146	24.1	0.9996	0.3175
Hispanic Mother	27	4.1	37	6.1	1.6227	0.1047
Kessner Index of PNC						
Adequate	408	62.1	381	63.0	0.3207	0.7484
Intermediate	111	16.9	128	21.2	1.9305	0.0535
Inadequate	91	13.9	64	10.6	-1.7693	0.0768
Smoked during pregnancy	179	27.3	150	24.8	-0.9911	0.3216
Drank during pregnancy	11	1.7	13	2.2	0.6165	0.5376
Number at Birth						
One	551	83.9	513	84.8	0.4525	0.6509
Two or more	106	16.1	92	15.2	-0.4525	0.6509
Birthweight Group						
VLBW	318	48.4	301	49.8	0.4793	0.6317
MLBW	84	12.8	83	13.7	0.4890	0.6249
NBW	255	38.8	220	36.4	-0.8972	0.3696
Age at Death						
Early neonatal (<7 days)	344	52.4	317	52.4	0.0133	0.9894
Late neonatal (7-27 days)	97	14.8	92	15.2	0.2201	0.8258
Postneonatal (>27 days)	216	32.9	196	32.4	-0.1817	0.8558
Black & Other						
Maternal Age						
Less than 18 years	91	10.2	67	7.8	-1.7767	0.0756
18-34 years	723	81.0	716	83.0	1.0912	0.2752
35 or more years	78	8.7	80	9.3	0.3920	0.6951
Maternal Education						
High School or less	613	68.7	605	70.1	0.6632	0.5072
More than High School	236	26.4	225	26.1	-0.1695	0.8654
Unmarried Mother	554	62.0	555	64.3	0.9869	0.3237
Hispanic Mother	2	0.2	4	0.5	0.8599	0.3898
Kessner Index of PNC						
Adequate	408	45.7	458	53.1	3.0932	0.0020
Intermediate	204	22.8	205	23.8	0.4510	0.6520
Inadequate	205	23.0	147	17.0	-3.0993	0.0019
Smoked during pregnancy	72	8.1	75	8.7	0.4750	0.6348
Drank during pregnancy	12	1.3	10	1.2	-0.3485	0.7275
Number at Birth						
One	785	87.9	772	89.5	1.0240	0.3058
Two or more	108	12.1	91	10.5	-1.0240	0.3058
Birthweight Group						
VLBW	588	65.8	573	66.4	0.2438	0.8074
MLBW	115	12.9	101	11.7	-0.7492	0.4537
NBW	190	21.3	188	21.8	0.2589	0.7957
Age at Death						
Early neonatal (<7 days)	558	62.5	508	58.9	-1.5534	0.1203
Late neonatal (7-27 days)	100	11.2	103	11.9	0.4828	0.6292
Postneonatal (>27 days)	235	26.3	252	29.2	1.3499	0.1771

[1] Data is stratified by race of mother.
"Unknown" levels of each variable are not listed, but percentages are based on their inclusion.

Leading Causes Of Infant Death

Congenital anomalies, short gestation, and Sudden Infant Death Syndrome (SIDS) have been the top three leading causes of infant death in South Carolina for the past decade (except SIDS was the fourth leading cause of infant death in 2001 and 2002). Congenital anomalies and short gestation primarily resulted in neonatal deaths, while SIDS deaths were mostly postneonatal.

The percentages were calculated for several leading causes of infant death. This shows the percentage of infant deaths each year due to a specific cause. All rates prior to 1999 have been adjusted using comparability ratios provided by the National Center for Health Statistics; therefore, all rates over this time period tend to be comparable to the rates of 1999 and after. The percentage of infant deaths due to SIDS decreased from 11.0 percent in 1990 to 7.7 percent in 2002 except 1998 (10.8 percent). The percentages of infant deaths due to congenital anomalies and to short gestation have fluctuated with current percentages (16.2 and 14.5). These trends are shown in Figure 4.

Congenital anomalies and short gestation primarily resulted in neonatal deaths, while SIDS deaths were mostly postneonatal.

Figure 4. Top Three Leading Causes of Infant Death, 1990-2002 SC Residence Data

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Congenital Anomalies	13.1%	12.6%	12.5%	14.5%	13.2%	14.8%	14.1%	14.2%	16.6%	16.8%	16.2%	15.4%	16.2%
Short Gestation	11.8%	9.8%	12.0%	13.5%	15.8%	13.6%	11.9%	13.2%	18.8%	16.6%	19.2%	15.4%	14.5%
SIDS	11.0%	11.1%	9.9%	9.8%	9.1%	8.2%	7.7%	8.0%	10.8%	7.2%	7.9%	7.5%	7.7%

Note: Percentage has been adjusted in accordance with ICD-9 to ICD-10 changes.
Comparability ratio: Congenital Anomalies:0.91, SIDS:1.04, Short Gestation:1.11

Multivariate Logistic Regression Analysis

Table 4 presents the results of the logistic regression analysis. The infant death was selected as an outcome variable. Adjusted odds ratios and 95% confidence intervals (CI) were presented for selected variables. The logistic regression model was run separately by race of mother (total, white, and black and other mothers). The possible risk factors included maternal age, maternal education, marital status, ethnicity, smoking, drinking, adequacy of prenatal care, and number at birth. Birthweight was not included due to its strong association with infant death.

The odds ratio and 95% CI for infant deaths from black and other mothers who were older than 35 was 1.38 and 1.08-1.76. However, maternal ages of total and white mothers were not significant after controlling for other risk factors. For white and total mothers, marital status was significant (table 4). White mothers receiving intermediate and inadequate prenatal care were more likely to have infant deaths: Odds ratio=1.38 (1.12-1.70) and OR=2.08 (1.56-2.77), compared with those receiving adequate prenatal care. Black and other mothers receiving inadequate prenatal care were more likely to have infant deaths: OR=1.63 (1.34-2.00). Among total mothers receiving intermediate and inadequate prenatal care, the odds ratios and 95% CIs for infant deaths were 1.18 (1.03-1.34) and 1.92 (1.63-2.26). Smoking during pregnancy was a significant risk factor of white mothers, however, it was not significant for total mothers and black and other mothers. Maternal education, inadequate prenatal care, and multiple births were significant risk factors regardless of race of mother. Hispanic mothers for white and total were less likely to have infant deaths: OR=0.68 (0.48-0.97) and OR=0.48 (0.35-0.67). Drinking during pregnancy was not a significant risk factor regardless of race of mother.

Maternal education, inadequate prenatal care, and multiple births were significant risk factors regardless of race of mother.

Table 4. Adjusted Odds Ratios and 95% Confidence Intervals for the Selected Maternal Characteristics Associated with Infant Mortality, 2000-2002 SC Residence Data

Characteristics	White OR	White 95% CI	Black & Other OR	Black & Other 95% CI	Total OR	Total 95% CI
Maternal Age						
Less than 18 years	1.39	0.97-1.98	0.91	0.70-1.19	0.99	0.80-1.23
18-34 years	1.00		1.00		1.00	
35 or more years	0.97	0.74-1.28	1.38	1.08-1.76	1.20	1.00-1.43
Maternal Education						
High School or less	1.42	1.17-1.73	1.29	1.09-1.53	1.43	1.25-1.62
More than High School	1.00		1.00		1.00	
Unmarried Mother	1.25	1.02-1.53	1.16	0.98-1.37	1.67	1.48-1.88
Hispanic Mother	0.68	0.48-0.97	0.49	0.18-1.33	0.48	0.35-0.67
Kessner Index of PNC						
Adequate	1.00		1.00		1.00	
Intermediate	1.38	1.12-1.70	0.96	0.81-1.14	1.18	1.03-1.34
Inadequate	2.08	1.56-2.77	1.63	1.34-2.00	1.92	1.63-2.26
Smoked during pregnancy	1.41	1.14-1.73	1.16	0.90-1.50	1.04	0.90-1.21
Drank during pregnancy	1.71	0.87-3.34	0.91	0.42-1.96	1.29	0.78-2.13
Number at Birth						
One	1.00		1.00		1.00	
Two or more	6.53	5.16-8.27	3.91	3.11-4.93	4.96	4.21-5.84

[1] Data is stratified by race of mother.

Geographic Information Systems (GIS) Application

Aggregate maps can give public health professionals the ability to see how a county compares to its neighboring counties or how counties in one health district compare to other health districts across the state. In Figure 5, each county's five-year infant mortality rate was compared with the overall five-year state infant mortality rate of 9.2 infant deaths per 1,000 live births. Four counties in South Carolina had an overall five-year infant mortality rate between 9.2 and 9.6, which was slightly higher than the state rate. Four counties showed a rate slightly lower than the state rate (between 8.8 and 9.2). Twelve counties showed rates significantly lower than the state rate (less than 8.8), while 26 counties showed rates significantly higher (greater than 9.6). Rates may vary from county to county within each health district. The state's two largest health districts, Pee Dee and Upper Savannah, consist of six counties. Five counties in Pee Dee showed rates significantly higher than the state rate, while only one county had a rate higher than the state rate. All counties in Upper Savannah showed rates significantly higher than the state rate. The rates of the two counties in Appalachia II were significantly lower.

Figure 5. Five-year infant mortality rates by county in South Carolina, as compared to state five-year infant mortality rate. 1998-2002

**Infant Mortality Rate
Per 1,000 Live Births**

- Significantly Lower
- Lower
- 9.2 = State Rate
- Higher
- Significantly Higher
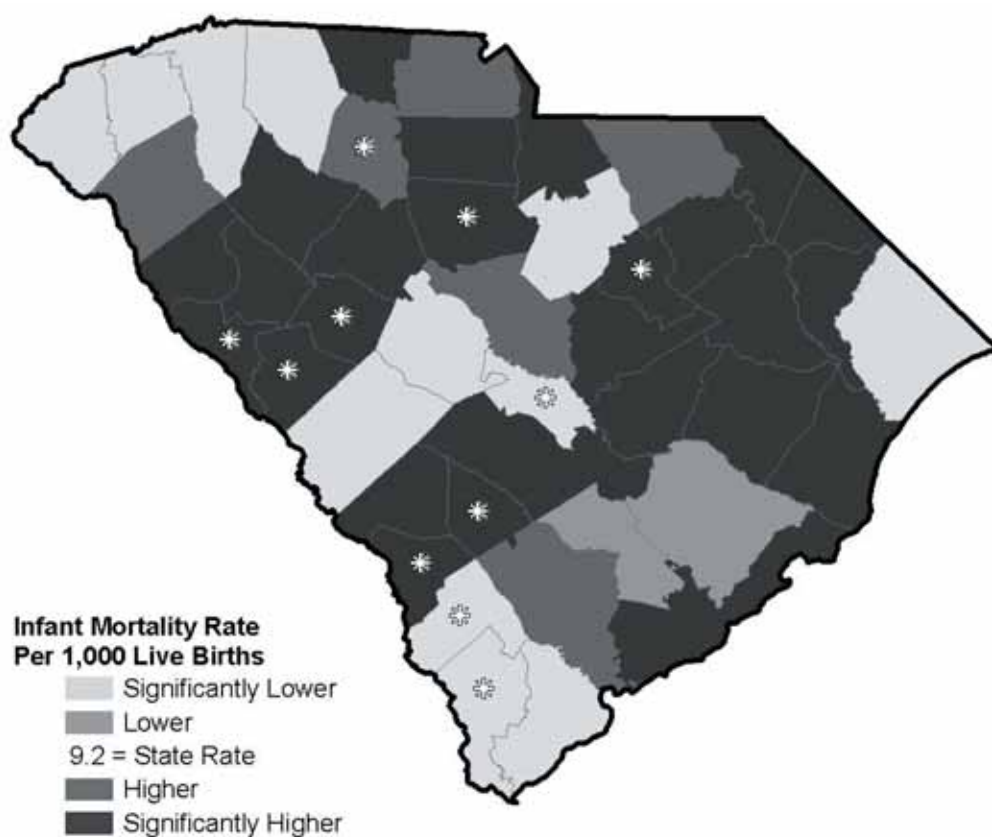
Note: * Indicates a rate calculated with 20 or fewer deaths. This rate is unreliable and should be used cautiously.

Significantly Lower indicates a rate lower than 8.8.
Lower indicates a rate between 8.8 and 9.2.
Higher indicates a rate between 9.2 and 9.6.
Significantly Higher indicates a rate greater than 9.6.

There were no county-level rates exactly equal to 9.2.

Conclusion And Recommendation

In recent years, South Carolina's infant mortality rate appears to be fluctuating rather than continuing to decline. Because the causes of infant mortality are complex, continued efforts must be made to investigate contributors toward infant mortality. More effective state and local community efforts must continue so that the complex web of causation for infant mortality can be successfully untangled. It is imperative for mothers to be in optimal health, practice healthy behaviors, and receive the best possible perinatal care in order to promote a healthy pregnancy outcome. As shown, there are big racial and socio-economic disparities (i.e., marital status, education, etc). There is still much work to be done in South Carolina to further reduce these disparities. Collaborative efforts among communities are essential for success in reaching these goals.

Low birthweight, like infant mortality, is a multi-dimensional issue. Since the majority of infant deaths that occur in South Carolina are low birthweight infants, an ultimate goal of decreasing the number of low birthweight infants should, in turn, yield a decrease in the infant mortality rate and reduce disparities.

Because the causes of infant mortality are complex, continued efforts must be made to investigate contributors toward infant mortality.

Technical Notes

Congenital Anomalies: Refers to the ICD code grouping entitled "Congenital malformations, deformations, and chromosomal abnormalities." This is a rankable cause of infant death according to NCHS guidelines.

Infant Death: A death before the age of 1; this does NOT include fetal deaths.

ICD (International Classification of Disease): An established system of categories and criteria by which morbid events are assigned and analyzed.

Level III Hospital: Hospitals classified as Level III are staffed and trained to handle all aspects of perinatal care including high risk and complex neonatal patients.

Live Birth/Infant Death Cohort: This file contains live birth information for each calendar year. In the event of a live birth not surviving the first year of life (an infant death), death certificate information was appended to the infant's birth certificate information.

Maternal Complications: Refers to the ICD code grouping entitled "Newborn affected by maternal complications of pregnancy." This is a rankable cause of infant death according to NCHS guidelines.

Short Gestation: Refers to the ICD code grouping entitled "Disorders related to short gestation and low birthweight, not elsewhere classified." This is a rankable cause of infant death according to NCHS guidelines.

More About GIS

For several years, South Carolina vital records information (births, deaths, cancer, etc.) has been geocoded for GIS applications. Sophisticated geocoding software allows the translation of address information from sources such as vital records data into a location or particular point on a map. Point-level maps are highly confidential; therefore, point data is often aggregated up to the county level.

For more information on GIS, please contact the GIS lab: shoultzjj@dhec.sc.gov.

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